MISSION SERVICES PROGRAM OFFICE

Space Network (SN)
Web Services Interface (SWSI)
Performance Verification Matrix (PVM)

Revision 1

February 2004

National Aeronautics and
Space Administration

Goddard Space Flight Center
Greenbelt, Maryland

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Revision 1

February 2004

Approved By:

_____

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Change Information Page

List of Effective Pages	
Page Number	**Issue**
All	Revision 1

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February 2004   iv   452-PVM-SWSI

Revision 1

DCN Control Sheet

DCN Number	Date/Time Group	Month/Year	Section(s) Affected	Initials

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Preface

Direct all comments, questions, or suggestions regarding this document to:

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Section 1.   Introduction

1.1   Purpose

The Space Network (SN) Web Services Interface (SWSI) Performance Verification Matrix (PVM) is the primary tool for tracking the verification of all the National Aeronautics and Space Administration (NASA) Mission Services Program (MSP) SN Project SWSI requirements documented in 453-SRD-SWSI, the SWSI System Requirements Document (SRD).

1.2   Document Organization

The organization of the SWSI PVM is as follows:

    a. Section 1 "Introduction" provides an introduction to the SWSI PVM. It describes the purpose and organization of the document, and provides the list of applicable documents.

    b. Section 2 "SWSI Requirements" documents the allocation of the SWSI SRD requirements to verification methods and, where applicable, verification cases. It also lists the verification status (e.g., verified, not verified, waived) of each SWSI SRD requirement and the document number of the verification report or other document in which each requirement's verification is documented.

1.3   Maintenance and Control

The information provided in this document is maintained in the SWSI PVM database. This information is extracted from applicable test procedures, test reports, and other applicable documentation. The PVM also identifies all requirement waivers that have been approved by NASA. The first (Original) issue of the PVM document reflected the verification status of the SWSI requirements through SWSI Release 03.1 (General and Network Control Center Data System (NCCDS) functionalities). The final (Revision 1) PVM document is being published at the delivery of SWSI Release 04.1 (Demand Access System (DAS) functionality).

Verification of 191 SWSI SRD requirements has been tracked in the SWSI PVM. Of the 191 SWSI SRD requirements, 178 have passed verification and 13 have not passed verification. Waivers have been granted for the 13 requirements that did not pass verification.

1.4   Requirement Numbers

A SWSI PVM requirement number is based on the SWSI SRD paragraph number in which the requirement is found. For example, requirement number "3.2.2" can be found in the SWSI SRD in paragraph 3.2.2.

1.5   Verification Methods

The following definitions of verification methods are used in the SWSI PVM:

a. Test. Test is the exercise of SWSI operations to provide performance data against specified requirements. Tests are performed using documented and configuration managed test procedures.

b. Demonstration. Demonstration is the exercise of basic SWSI functions during the course of operations or the conduct of specific tests. Examples include system data management, or hosting of the SWSI client on multiple platforms.

c. Inspection. Inspection is the visual examination/investigation of design, product, or documentation to determine compliance with specified requirements.

d. Analysis. Analysis is a mathematical treatment, including computer analysis or appropriate models, to determine compliance with specified requirements where Test/Demonstration/Inspection are not feasible. Analysis may be combined with test results to provide verification of a requirement.

1.6   Report Format

The following format is used throughout the PVM for each SWSI requirement:

a. Requirement Number. The requirement number is the SWSI SRD paragraph number. Each applicable requirement number designates a paragraph that contains a contractually binding "shall" statement.

b. Requirement Text. The requirement text contains the actual requirement statement as specified in the SWSI SRD.

c. Functionality. There are three types of SWSI requirement functionality:

1. NCCDS. Requirements that specifically relate to the SWSI capability to support the SN customer-NCCDS interface are designated "NCCDS" requirements.

2. DAS. Requirements that specifically relate to the SWSI capability to support the SN customer-DAS interface are designated "DAS" requirements.

3. General. Requirements that are not specifically applicable to either the NCCDS or the DAS functionalities (e.g., installation requirements, security requirements, database management requirements, etc.) are designated "General" requirements.

d. Requirement Status. This lists the final verification status of the requirement (Verified or Waived). A "Not Verified" entry is an interim state indicating that the requirement has not yet been verified. This is not a requirement final state. The only approved final states for requirement status are either "Verified" (i.e., the requirement passed verification) or "Waived" (i.e., NASA has formally approved a waiver request for the requirement).

e. Method. This item identifies the method or methods to be used to verify the requirement. Verification methods are described in Section 1.5 above.

f. Test Case. A requirement verified by "Test" is allocated to a SWSI test case number, or in the case of some DAS-functionality requirements, to a DAS test case number.

g. Description. This item provides detail regarding the verification of a requirement using the "Demonstration", "Inspection", or "Analysis" method.

h. Verification Status. This item reflects the status (Pass or Fail) of the test, demonstration, analysis, or inspection that is used to verify the requirement. "Pending" is an interim state used to indicate that the formal attempt to verify a requirement has not yet occurred.

i. Report. This item contains the document number of the test report in which the verification of the requirement is documented.

1.7 Applicable Documents

a. Space Network (SN) Web Services Interface (SWSI) System Requirements Document (SRD), 453-SRD-SWSI.

b. Space Network (SN) Web Services Interface (SWSI) System Design Specification, 453-SDS-SWSI.

c. Space Network (SN) Web Services Interface (SWSI) Server Operator's Guide, 452-SOG-SWSI.

d. Space Network (SN) Web Services Interface (SWSI) Security Plan, 450-SP-SWSI.

e. Space Network (SN) Web Services Interface (SWSI) Server Training package.

f. SWSI Test Procedures and Reports:

1. SWSI-CONN-001 (System Performance)

2. SWSI-ERROR-001 (SWSI Error Test)

3. SWSI-GCMR-001 (Real Time GCMR)

4. SWSI-GCMR-002 (Test DAS Real-Time Requests)

5. SWSI-LOGON-001 (Logon)

6. SWSI-MISC-001 (Connections and Data Segregation)

7. SWSI-MISC-002 (Client Connections Status)

8. SWSI-MISC-003 (Client processing of RCTD, TTM and AFN Messages and Client Logging)

9. SWSI-MISC-004 (DAS Data Segregation)

10. SWSI-PBKMR-001 (Test PBKMRs)

11. SWSI-PBKR-001 (DAS Playback Planning Test)

12. SWSI-PEND-001 (Test Handling of Pending Events)

13. SWSI-PERF-001 (System Performance)

14. SWSI-RADR-001 (Test Resource Allocation Deletion Requests)

15. SWSI-RADR-002 (Test DAS Resource Allocation Deletion Requests)

16. SWSI-RAMR-001 (Test RAR Modification Requests)

17. SWSI-RAR-001 (Test DAS Resource Allocation Requests)

18. SWSI-RAVAIL-001 (Test Resource Availability Reports)

19. SWSI-SCH-001 (Schedule MA/SA/Cross Tracking and ETE services)

20. SWSI-SCH-002 (Schedule New Services)

21. SWSI-SCH-003 (Replace, ALT SAR, Clone, Delete, Wait List, TDRSS Set and TSW from scheduling)

22. SWSI-SCH-004 (CSN, SBSN, STPT, STMT, MIND Scheduling)

23. SWSI-SSCEDIT-001 (Test Editing of SSCs)

24. SWSI-START-001 (Initial User Environment Test)

25. SWSI-TUT-001 (TDRSS Unscheduled Time (TUT))

26. SWSI-UPD-001 (MAF/MAR SERVICES UPD)

27. SWSI-UPD-002 (SSAF/SSAR SERVICES UPD)

28. SWSI-UPD-003 (KuSAF/KuSAR SERVICES UPD)

29. SWSI-UPD-004 (SMAF/SMAR SERVICES UPD)

30. SWSI-UPD-005 (KaSAF/KaSAR SERVICES UPD)

31. SWSI-UPD-006 (Test UPD Monitoring)

32. SWSI-UPD-007 (Test UPD Monitoring)

33. SWSI-VECTOR-001 (Create and Transmit Vectors)

34. SWSI-VECTOR-002 (Create and Transmit Vectors to DAS)

35. SWSI-VECTOR-003 (Test State Vector Error Handling)

g. DAS Acceptance Test Plan and Procedures, ITT Industries Doc. No. 009-600085.

h. Space Network (SN) Web Services Interface (SWSI) Installation Engineering Change, EC-8303.

i. Sun Ultra 2 Series Reference Manual, Sun Microsystems Doc. No. 802-2562-11.

j. Sun Blade 1000 Service Manual, Sun Microsystems Doc. No. 805-4496-10.

k. Sun StorEdge A1000 and D1000 Installation, Operations, and Service Manual, Sun Microsystems Doc. No. 806-2624-12.

Section 2.   SWSI Requirements

Requirement: 3.2.2		*Status:* Verified
Text: Any SWSI software to be hosted on the SWSI client shall validly execute on any client platform supporting the Java 2.0 Virtual Machine.		*Functionality:* General
Method: Demonstration	**Description:** Demonstration by Use (on Multiple Platforms)	**Status:** Pass

Requirement: 3.2.3		*Status:* Verified
Text: Any SWSI software to be hosted on the SWSI client shall be packaged such that it can be distributed to and/or accessed by users via electronic media.		*Functionality:* General
Method: Demonstration	**Description:** Demonstration by Use.	**Status:** Pass

Requirement: 3.2.4		*Status:* Verified
Text: Custom developed SWSI software shall be designed to facilitate future modifications.		*Functionality:* General
Method: Inspection	**Description:** Inspection of 453-SDS-SWSI, the SWSI System Design Specification.	**Status:** Pass

Requirement: 3.3.2.2		*Status:* Verified
Text: The SWSI client shall be capable of supporting the Java 2.0 Virtual Machine.		*Functionality:* General
Method: Demonstration	**Description:** Demonstration by Use.	**Status:** Pass

Requirement: 3.3.2.3			*Status:* Verified
Text: For Internet and Open IONET users who will use SN services provided via interaction with the NCCDS, the SWSI Client Workstation shall be capable of establishing and sustaining all connections with the SWSI Open Server applicable to the SWSI's interface with the NCCDS.			*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 3.3.2.4   **Status:** Verified

Text: For Internet and Open IONET users who will use SN services provided via interaction with   **Functionality:** DAS
the DAS, the SWSI Client Workstation shall be capable of establishing and sustaining all
connections with the SWSI Open Server applicable to the SWSI's interface with the DAS.

Comments: DAS test case Q1 documented in DAS Acceptance Test Report Vol I: Qualification Tests,
ITT Doc. No. 028-600085.
SWSI requirement 3.3.2.4 regression tested during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** SWSI-CONN-001 | **Report:** SWSI-CONN-001 | **Status:** Pass |
| **Method:** Demonstration | **Description:** Demonstrated by Use during DAS Test Case Q1 | | **Status:** Pass |

Requirement: 3.3.2.5   **Status:** Verified

Text: For Closed IONET users who will use SN services provided via interaction with the   **Functionality:** NCCDS
NCCDS, the SWSI Client Workstation shall be capable of establishing and sustaining all
connections with the SWSI Backend Server applicable to the SWSI's interface with the
NCCDS.

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

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Requirement: 3.3.2.6   **Status:** Verified

Text: For Closed IONET users who will use SN services provided via interaction with the DAS,   **Functionality:** DAS
the SWSI client shall be capable of establishing and sustaining all connections with the
SWSI Backend Server applicable to the SWSI's interface with the DAS.

Comments: DAS test case S6 documented in DAS Acceptance Test Report Vol II: Site Acceptance
Tests, ITT Doc. No. 028-600086.
SWSI requirement 3.3.2.6 regression tested during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** SWSI-CONN-001 | **Report:** SWSI-CONN-001 | **Status:** Pass |
| **Method:** Demonstration | **Description:** Demonstrated by Use during DAS Test Case S6 | | **Status:** Pass |

Requirement: 3.3.3.1   **Status:** Verified

Text: For Internet and Open IONET users who will use SN services provided via interaction with the NCCDS, the SWSI open server shall function as a proxy for the SWSI Backend Server. For these users, the SWSI open server shall be capable of establishing and sustaining all connections with the SWSI Backend Server applicable to the SWSI's interface with the NCCDS.   **Functionality:** NCCDS

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 3.3.3.2   **Status:** Verified

Text: As needed, the SWSI open server shall route requests from the SWSI client to the NCCDS and return responses from the NCCDS to the SWSI Client Workstation. In all cases, these exchanges will be via the IONet Secure Gateway and the SWSI backend server.   **Functionality:** NCCDS

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 3.3.3.3

Text: For Internet and Open IONET users who will use SN services provided via interaction with the DAS, the SWSI open server shall function as a proxy for the SWSI Backend Server. For these users, the SWSI open server shall be capable of establishing and sustaining all connections with the SWSI Backend Server applicable to the SWSI's interface with the DAS.

Comments: DAS test case Q1 documented in DAS Acceptance Test Report Vol I: Qualification Tests, ITT Doc. No. 028-600085.

Method: Demonstration   **Description:** Demonstrated by Use during DAS Test Case Q1

Status: Verified

Functionality: DAS

Status: Pass

Requirement: 3.3.3.4

Text: As needed, the SWSI open server shall route requests from the SWSI client to the DAS and return responses from the DAS to the SWSI client. In all cases, these exchanges will be via the IONet Secure Gateway and the SWSI backend server.

Comments: DAS test case S6 documented in DAS Acceptance Test Report Vol II: Site Acceptance Tests, ITT Doc. No. 028-600086.

Method: Demonstration   **Description:** Demonstrated by Use during DAS Test Case S6

Status: Verified

Functionality: DAS

Status: Pass

Requirement: 3.3.4.1

Text: For Closed IONET users who will use SN services provided via interaction with the NCCDS, the SWSI backend server shall be capable of establishing and sustaining all applicable connections with the NCCDS.

Status: Verified

Functionality: NCCDS

Method:	Test Case:	Report:	Status:
Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 3.3.4.2   **Status:** Verified

Text: For Closed IONET users who will use SN services provided via interaction with the DAS, the SWSI backend server shall be capable of establishing and sustaining all applicable connections with the DAS.

Functionality: DAS

Comments: DAS test case S6 documented in DAS Acceptance Test Report Vol II: Site Acceptance Tests, ITT Doc. No. 028-600086.

Method: Demonstration	**Description:** Demonstrated by Use during DAS Test Case S6	**Status:** Pass

---

Requirement: 3.3.4.3   **Status:** Verified

Text: For Internet and Open IONET users who will use SN services provided via interaction with the NCCDS, the SWSI backend server shall be capable of establishing and sustaining all applicable connections with the NCCDS. In all cases, these exchanges between Internet and Open IONET users and the SWSI backend server will be via the IONet Secure Gateway and the SWSI open server.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

---

Requirement: 3.3.4.4   **Status:** Verified

Text: For Internet and Open IONET users who will use SN services provided via interaction with the DAS, the SWSI backend server shall be capable of establishing and sustaining all applicable connections with the DAS. In all cases, these exchanges between Internet and Open IONET users and the SWSI backend server will be via the IONet Secure Gateway and the SWSI open server.

Functionality: DAS

Comments: DAS test case S6 documented in DAS Acceptance Test Report Vol II: Site Acceptance Tests, ITT Doc. No. 028-600086.

Method: Demonstration	**Description:** Demonstrated by Use during DAS Test Case S6	**Status:** Pass

Requirement: 3.3.4.5   *Status:* Verified

Text: In support of Internet and Open IONET users, the SWSI backend server shall be capable   *Functionality:* General
of establishing connections with the SWSI open server via the IONet Secure Gateway.

Method: Demonstration   **Description:** Demonstration by Use.   **Status:** Pass

---

Requirement: 3.4.1   *Status:* Verified

Text: For any combination of Internet, Open IONET and Closed IONET SWSI client users, the   *Functionality:* General
SWSI servers shall be capable of supporting simultaneous connections with multiple SWSI
clients. Refer to 4.8.1.

Method: Test   **Test Case:** SWSI-MISC-001   **Report:** SWSI-MSIC-001   **Status:** Pass

---

Requirement: 3.4.2.1   *Status:* Verified

Text: All communications between the SWSI open server and the SWSI backend server shall be   *Functionality:* General
channeled through the IONet Secure Gateway.

Method: Inspection   **Description:** Inspection of 453-SDS-SWSI, the SWSI System Design   **Status:** Pass
Specification.

Requirement: 3.4.2.2   *Status:* Verified

Text: When communicating with each other, the SWSI open server and the SWSI backend   *Functionality:* General
server shall not employ protocols or communications techniques that will be blocked by
the IONet Secure Gateway.

Method: Inspection   **Description:** Inspection of 453-SDS-SWSI, the SWSI System Design   **Status:** Pass
Specification.

Requirement: 3.4.2.3   *Status:* Verified

Text: The SWSI shall not require the IONet Secure Gateway to modify its rule set in response to   *Functionality:* General
SWSI configuration changes, or in response to the addition or removal of SWSI
customers.

Method: Inspection   **Description:** Inspection of 453-SDS-SWSI, the SWSI System Design   **Status:** Pass
Specification.

Requirement: 3.4.3.1   *Status:* Verified

  Text: For any SWSI client at any time, the SWSI shall be capable of communicating with either the NCCDS located in the operational NCC environment or with the NCCDS located in the ANCC. Refer to 3.7. This implies that the SWSI will be capable of simultaneously communicating with the operational NCCDS for some clients and with the ANCC's NCCDS for other clients.   *Functionality:* NCCDS

Method: Test   **Test Case:** SWSI-MISC-001   **Report:** SWSI-MSIC-001   **Status:** Pass

---

Requirement: 3.4.3.2   *Status:* Verified

  Text: All communications between the SWSI and the NCCDS shall comply with 451-ICD-NCCDS/MOC.   *Functionality:* NCCDS

Method	Test Case	Report	Status
Test	SWSI-ERROR-001	SWSI-ERROR-001	Pass
Test	SWSI-GCMR-001	SWSI-GCMR-001	Pass
Test	SWSI-LOGON-001	SWSI-LOGON-001	Pass
Test	SWSI-MISC-001	SWSI-MSIC-001	Pass
Test	SWSI-MISC-002	SWSI-MSIC-002	Pass
Test	SWSI-MISC-003	SWSI-MSIC-003	Pass
Test	SWSI-SCH-001	SWSI-SCH-001	Pass
Test	SWSI-SCH-002	SWSI-SCH-002	Pass
Test	SWSI-SCH-003	SWSI-SCH-003	Pass
Test	SWSI-SCH-004	SWSI-SCH-004	Pass
Test	SWSI-TUT-001	SWSI-TUT-001	Pass
Test	SWSI-UPD-001	SWSI-UPD-001	Pass
Test	SWSI-UPD-002	SWSI-UPD-002	Pass
Test	SWSI-UPD-003	SWSI-UPD-003	Pass
Test	SWSI-UPD-004	SWSI-UPD-004	Pass
Test	SWSI-UPD-005	SWSI-UPD-005	Pass
Test	SWSI-VECTOR-001	SWSI-VECTOR-001	Pass

Requirement: 3.4.3.3

Status: Verified

Text: The SWSI shall employ hypertext transfer protocol (HTTP) to retrieve TDRSS Unscheduled Time (TUT) information from the NCCDS. The SWSI shall employ Transmission Control Protocol/Internet Protocol (TCP/IP) for all other communications with the NCCDS. The SWSI will not use Nascom 4800 Bit Block (BB) protocol or File Transfer Protocol (FTP) for any of its communications with the NCCDS.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass

---

Requirement: 3.4.3.4a

Status: Verified

Text: As needed, the SWSI shall establish communications connections with NCCDS services (refer to Table 403 of 451-ICD-NCCDS/MOC) and automatically transmit any messages needed to configure the services. In particular, the SWSI shall automatically transmit Schedule Result Request messages on the NCCDS Schedule Status service connection.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass

---

Requirement: 3.4.3.4b

Status: Verified

Text: As needed, the SWSI shall establish communications connections with NCCDS services (refer to Table 403 of 451-ICD-NCCDS/MOC) and automatically transmit any messages needed to configure the services. In particular, the SWSI shall automatically transmit User Performance Data Request messages on the NCCDS User Performance Data service connection.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-002	**Report:** SWSI-UPD-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-003	**Report:** SWSI-UPD-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-004	**Report:** SWSI-UPD-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-005	**Report:** SWSI-UPD-005	**Status:** Pass

Requirement: 3.4.3.5 **Status:** Verified

Text: For all applicable message formats and message format parameters, the SWSI shall exercise the "full support" customer options. The SWSI will not exercise the "baseline" customer options. **Functionality:** NCCDS

Method: Test **Test Case:** SWSI-SCH-004 **Report:** SWSI-SCH-004 **Status:** Pass

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Requirement: 3.4.3.6 **Status:** Verified

Text: For all applicable message formats and message format parameters, the SWSI shall exercise the "normal user" options. The SWSI will not exercise the "Shuttle" options. **Functionality:** NCCDS

Method:	Test Case:	Report:	Status:
Method: Test	**Test Case:** SWSI-ERROR-001	**Report:** SWSI-ERROR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-LOGON-001	**Report:** SWSI-LOGON-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-MISC-001	**Report:** SWSI-MSIC-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-MISC-002	**Report:** SWSI-MSIC-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-MISC-003	**Report:** SWSI-MSIC-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-004	**Report:** SWSI-SCH-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-002	**Report:** SWSI-UPD-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-003	**Report:** SWSI-UPD-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-004	**Report:** SWSI-UPD-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-005	**Report:** SWSI-UPD-005	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 3.4.4   ***Status:*** Verified

    Text: All communications between the SWSI and the DAS shall comply with 451-ICD-DAS/SWSI.   ***Functionality:*** DAS

   Comments: SWSI 3.4.4 traces to DAS 3.3.1.a, tested in DAS Test Case Q13. DAS 3.3.1.a failed
verification. DAS waiver DAS-W10 was approved by NASA.
SWSI requirement 3.4.4 passed verification during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** SWSI-CONN-001	**Report:** SWSI-CONN-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-GCMR-002	**Report:** SWSI-GCMR-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-PBKMR-001	**Report:** SWSI-PBKMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-PBKR-001	**Report:** SWSI-PBKR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-PEND-001	**Report:** SWSI-PEND-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-RADR-001	**Report:** SWSI-RADR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-RADR-002	**Report:** SWSI-RADR-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-RAMR-001	**Report:** SWSI-RAMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-RAR-001	**Report:** SWSI-RAR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-RAVAIL-001	**Report:** SWSI-RAVAIL-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SSCEDIT-001	**Report:** SWSI-SSCEDIT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-START-001	**Report:** SWSI-START-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-006	**Report:** SWSI-UPD-006	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-007	**Report:** SWSI-UPD-007	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-002	**Report:** SWSI-VECTOR-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-003	**Report:** SWSI-VECTOR-003	**Status:** Pass

Requirement: 3.5.2   ***Status:*** Verified

    Text: The SWSI servers shall be capable of successful operation using the power available   ***Functionality:*** General
within the NCC facility. The SWSI servers shall not require either a quantify or quality of
electric power that exceeds the capabilities of the NCC facility.

Method: Inspection   **Description:** Inspection of Sun Ultra 2 Series Reference Manual, Sun Doc. No.   **Status:** Pass
802-2562-11; Sun Blade 1000 Service Manual, Sun Doc. No. 805-
4496-10; and Sun StorEdge A1000 and D1000 Install., Ops., and
Service Manual, Sun Doc. No. 806-2624-12.

Requirement: 3.5.3	*Status:* Verified
Text: The SWSI servers shall be capable of successful operation within the ambient temperature and humidity ranges available within the NCC facility. The SWSI servers shall not require modification of either the temperature or humidity control capabilities of the NCC facility.	*Functionality:* General

Method: Inspection	**Description:** Inspection of Sun Ultra 2 Series Reference Manual, Sun Doc. No. 802-2562-11; Sun Blade 1000 Service Manual, Sun Doc. No. 805-4496-10; and Sun StorEdge A1000 and D1000 Install., Ops., and Service Manual, Sun Doc. No. 806-2624-12.	**Status:** Pass

Requirement: 3.5.4.1	*Status:* Verified
Text: The equipment installation shall be documented by an Engineering Change (EC).	*Functionality:* General

Method: Inspection	**Description:** Inspection of WSC EC-8303.	**Status:** Pass

Requirement: 3.5.4.2	*Status:* Verified
Text: The EC shall list of all necessary power and signal cables.	*Functionality:* General

Method: Inspection	**Description:** Inspection of WSC EC-8303.	**Status:** Pass

Requirement: 3.5.4.3	*Status:* Verified
Text: Cable installation shall be in accordance with the requirements of STDN-SPEC-6, GSFC Specification Installation Requirements for STDN Equipment.	*Functionality:* General

Method: Inspection	**Description:** Inspection of WSC EC-8303.	**Status:** Pass

Requirement: 3.5.4.4	*Status:* Verified
Text: All cable fabrication shall be in accordance with the requirements of STDN-SPEC-4, Section 3.	*Functionality:* General

Method: Inspection	**Description:** Inspection of WSC EC-8303.	**Status:** Pass

Requirement: 3.5.5　　　　　　　　　　　　　　　　　　　　　　　　*Status:* Verified

　　　Text: Equipment installations shall be in accordance with STDN-SPEC-6, Installation　　*Functionality:* General
　　　　　　　Requirements for STDN Equipment.

Method: Inspection　　　　　　**Description:** Inspection of WSC EC-8303.　　　　　　**Status:** Pass

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Requirement: 3.5.5.1　　　　　　　　　　　　　　　　　　　　　　　　*Status:* Verified

　　　Text: Floor panels shall be in accordance with the requirements of STDN-SPEC-6.　　　*Functionality:* General

Method: Inspection　　　　　　**Description:** Inspection of WSC EC-8303.　　　　　　**Status:** Pass

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Requirement: 3.6.2　　　　　　　　　　　　　　　　　　　　　　　　*Status:* Verified

　　　Text: In the absence of waivers, the SWSI shall satisfy the Baseline Information Technology (IT)　　*Functionality:* General
　　　　　　　Security Requirements applicable to the MSN information category as specified in
　　　　　　　Appendix A of NPG 2810.1.

Method: Inspection　　　　　　**Description:** Inspection of 450-SP-SWSI, the SWSI Security Plan.　　　　**Status:** Pass

---

Requirement: 3.6.4　　　　　　　　　　　　　　　　　　　　　　　　*Status:* Verified

　　　Text: For all aspects of communications via the IONet, the SWSI shall comply with IP Operational　　*Functionality:* General
　　　　　　　Network (IONet) Security Plan, 290-003 and IP Operational Network (IONet) Access
　　　　　　　Protection Policy and Requirements, 290-004. However, in case of conflicts between
　　　　　　　NPG 2810.1, 290-003, and 290-004, 290-003 and 290-004 has precedence.

Method: Inspection　　　　　　**Description:** Inspection of 450-SP-SWSI, the SWSI Security Plan.　　　　**Status:** Pass

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Requirement: 3.7.1　　　　　　　　　　　　　　　　　　　　　　　　*Status:* Verified

　　　Text: In order to support Engineering Interface (EIF) testing, the SWSI shall provide the capability　　*Functionality:* NCCDS
　　　　　　　for SWSI clients to communicate with the ANCC's NCCDS via the SWSI servers.

Method: Test　　　　　　**Test Case:** SWSI-MISC-001　　　　**Report:** SWSI-MSIC-001　　　　**Status:** Pass

Requirement: 3.7.2   **Status:** Verified

    Text: The SWSI shall provide customers with the capability to segregate their test data from   **Functionality:** NCCDS
their operational data.

Method: Test   **Test Case:** SWSI-MISC-001   **Report:** SWSI-MSIC-001   **Status:** Pass

---

Requirement: 3.8.1   **Status:** Verified

    Text: The SWSI shall provide users of the SWSI Client software with a Graphical User Interface   **Functionality:** General
(GUI). The general features provided by the SWSI GUI shall include, but not necessarily
be limited to (refer to SWSI Req'ts Doc.: 3.8.1.a through 3.8.1.j).

Method:	Test Case:	Report:	Status:
Test	SWSI-ERROR-001	SWSI-ERROR-001	Pass
Test	SWSI-GCMR-001	SWSI-GCMR-001	Pass
Test	SWSI-LOGON-001	SWSI-LOGON-001	Pass
Test	SWSI-MISC-001	SWSI-MSIC-001	Pass
Test	SWSI-MISC-002	SWSI-MSIC-002	Pass
Test	SWSI-MISC-003	SWSI-MSIC-003	Pass
Test	SWSI-SCH-001	SWSI-SCH-001	Pass
Test	SWSI-SCH-002	SWSI-SCH-002	Pass
Test	SWSI-SCH-003	SWSI-SCH-003	Pass
Test	SWSI-SCH-004	SWSI-SCH-004	Pass
Test	SWSI-TUT-001	SWSI-TUT-001	Pass
Test	SWSI-UPD-001	SWSI-UPD-001	Pass
Test	SWSI-UPD-002	SWSI-UPD-002	Pass
Test	SWSI-UPD-003	SWSI-UPD-003	Pass
Test	SWSI-UPD-004	SWSI-UPD-004	Pass
Test	SWSI-UPD-005	SWSI-UPD-005	Pass
Test	SWSI-VECTOR-001	SWSI-VECTOR-001	Pass

Requirement: 3.8.2a   ***Status:*** Verified

Text: The SWSI shall provide users of the SWSI client with all user interface features   ***Functionality:*** NCCDS
necessary to support the SWSI functional requirements applicable to NCCDS interactions.

Method: Test	**Test Case:** SWSI-ERROR-001	**Report:** SWSI-ERROR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-LOGON-001	**Report:** SWSI-LOGON-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-MISC-001	**Report:** SWSI-MSIC-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-MISC-002	**Report:** SWSI-MSIC-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-MISC-003	**Report:** SWSI-MSIC-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-004	**Report:** SWSI-SCH-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-TUT-001	**Report:** SWSI-TUT-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-002	**Report:** SWSI-UPD-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-003	**Report:** SWSI-UPD-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-004	**Report:** SWSI-UPD-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-005	**Report:** SWSI-UPD-005	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 3.8.2b   ***Status:*** Verified

Text: The SWSI shall provide users of the SWSI client with all user interface features   ***Functionality:*** DAS
necessary to support the SWSI functional requirements applicable to DAS interactions.

Comments: DAS test case Q1 documented in DAS Acceptance Test Report Vol I: Qualification Tests,
ITT Doc. No. 028-600085.

Method: Demonstration   **Description:** Demonstrated by Use during DAS Test Case Q1   **Status:** Pass

Requirement: 3.8.2c

Text: The SWSI shall provide users of the SWSI client with user interface features providing integrated control and information presentation capabilities for operationally related groups of SN services regardless of whether the individual services are provided via interaction with the NCCDS or with the DAS (e.g., integrated presentation of the service configurations of forward services provided via NCCDS interactions and return services provided via DAS interactions).

Status: Verified

Functionality: General

Method: Demonstration   **Description:** Demonstration by Use.   **Status:** Pass

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Requirement: 3.8.3a

Text: The SWSI shall provide users of the SWSI client with access to information pertaining to the current status of each applicable SWSI communications connection.

Status: Verified

Functionality: General

Method: Test   **Test Case:** SWSI-MISC-002   **Report:** SWSI-MSIC-002   **Status:** Pass

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Requirement: 3.8.3b

Text: The SWSI shall provide users of the SWSI client with notification when the status of an applicable SWSI connection changes.

Status: Verified

Functionality: General

Method: Test   **Test Case:** SWSI-MISC-002   **Report:** SWSI-MSIC-002   **Status:** Pass

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Requirement: 3.8.3c

Text: The SWSI shall provide users of the SWSI client with access to any available system status information provided by the SWSI servers.

Status: Verified

Functionality: General

Method: Test   **Test Case:** SWSI-MISC-002   **Report:** SWSI-MSIC-002   **Status:** Pass

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Requirement: 3.8.4.1.1a

Text: The SWSI shall provide authorized SWSI administrative personnel with the capability to enter, modify, and delete customer authorization data.

Status: Verified

Functionality: General

Method: Demonstration   **Description:** Demonstration by Use (Data Management).   **Status:** Pass

Requirement: 3.8.4.1.1b	*Status:* Verified
Text: The SWSI shall provide authorized SWSI administrative personnel with the capability to review previously entered customer authorization data.	*Functionality:* General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 3.8.4.1.1c	*Status:* Verified
Text: The SWSI shall retain customer authorization data until deleted by authorized SWSI administrative personnel.	*Functionality:* General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 3.8.4.1.2a	*Status:* Verified
Text: For each user, the SWSI shall retain a user ID, a password, and a passphrase.	*Functionality:* General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 3.8.4.1.2b	*Status:* Verified
Text: For each user, the SWSI shall retain a list of SICs for the which the user is authorized.	*Functionality:* General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 3.8.4.1.2c	*Status:* Verified
Text: For each combination of user and SIC, the SWSI shall retain a list of valid Support Identifiers (SUPIDENs).	*Functionality:* General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 3.8.4.1.2d	*Status:* Verified
Text: For each user, the SWSI shall retain information indicating whether the user interacts with the NCCDS, with the DAS, or both.	*Functionality:* General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 3.8.4.1.2e

    Text: For each combination of NCCDS user and SUPIDEN, the SWSI shall retain a User ID and Password to be used in messages transmitted to the NCCDS. These User IDs and passwords will not necessarily be the same as the User IDs and passwords used to logon to the SWSI.

    Method: Demonstration   **Description:** Demonstration by Use (Data Management).

Status: Verified

Functionality: NCCDS

Status: Pass

Requirement: 3.8.4.2.1

    Text: The SWSI shall provide authorized users with the capability to logon to the SWSI.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001

Status: Verified

Functionality: General

Status: Pass

Requirement: 3.8.4.2.2

    Text: The SWSI shall validate a user's logon based on the user ID, password, and passphrase entered by the user.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001

Status: Verified

Functionality: General

Status: Pass

Requirement: 3.8.4.2.3

    Text: Within 10 seconds of its entry, the SWSI shall respond to each logon attempt with an indication of whether it has been accepted or rejected.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001

Status: Verified

Functionality: General

Status: Pass

Requirement: 3.8.4.2.4

    Text: The SWSI shall employ digital certificates in this validation process, and shall rely upon the NASA Certificate Authority to provide digital certificates to SWSI customers.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001

Status: Verified

Functionality: General

Status: Pass

Requirement: 3.8.4.2.5

    Text: The SWSI shall allow connections to be established between a SWSI client and SWSI servers only after a valid user logon from the SWSI client.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001

Status: Verified

Functionality: General

Status: Pass

Requirement: 3.8.4.2.6   **Status:** Verified

    Text: The SWSI shall allow only NCCDS users to access the SWSI NCCDS functions. This   **Functionality:** NCCDS
includes establishing connections with the NCCDS for the user.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001   **Status:** Pass

---

Requirement: 3.8.4.2.7   **Status:** Verified

    Text: The SWSI shall allow only DAS users to access the SWSI DAS functions. This includes   **Functionality:** DAS
establishing connections with the DAS for the user.

    Method: Demonstration   **Description:** Demonstration by Use.   **Status:** Pass

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Requirement: 3.8.4.2.8a   **Status:** Verified

    Text: For NCCDS users, the SWSI shall provide the user with the capability to select connection   **Functionality:** NCCDS
with either the operational NCCDS or with the ANCC's NCCDS.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001   **Status:** Pass

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Requirement: 3.8.4.2.8b   **Status:** Verified

    Text: For NCCDS users, the SWSI shall provide the user with the capability to select use of   **Functionality:** NCCDS
operational or test data.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001   **Status:** Pass

---

Requirement: 3.8.4.2.9   **Status:** Verified

    Text: The SWSI shall provide users with the capability to log-off.   **Functionality:** General

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001   **Status:** Pass

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Requirement: 3.8.4.2.10   **Status:** Verified

    Text: The SWSI shall maintain a record of currently logged-on users and log of login attempts at   **Functionality:** General
all times.

    Method: Test   **Test Case:** SWSI-LOGON-001   **Report:** SWSI-LOGON-001   **Status:** Pass

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Requirement: 4.2.1.2				***Status:*** Verified	
Text: In all cases, the SWSI shall ensure that each NCCDS user is precluded from accessing any other user's messages or data.				***Functionality:*** NCCDS	
Method: Test	**Test Case:** SWSI-MISC-001		**Report:** SWSI-MSIC-001	**Status:** Pass	

Requirement: 4.2.2.1				***Status:*** Verified	
Text: For each SIC supported by the SWSI, the SWSI shall provide authorized SWSI administrative personnel with the capability to create and maintain all customer data necessary to perform the scheduling function. In particular, this will include a set of service specification codes (SSCs) corresponding to the set of SSCs maintained for the customer in the NCCDS database, and the list of valid SUPIDENs for the SIC. The SWSI shall provide the user with the capability to review and reference this data in the process of entering schedule requests.				***Functionality:*** NCCDS	
Method: Demonstration	**Description:** Demonstration by Use (Data Management).			**Status:** Pass	

Requirement: 4.2.2.2.1a				***Status:*** Verified	
Text: The SWSI shall provide the user with the capability to enter the following types of schedule requests: Schedule Add Request (SAR), Schedule Delete Request (SDR), Schedule Replace Request (RR), Alternate SAR (ASAR), Schedule Wait List Request (WLR).				***Functionality:*** NCCDS	
Method: Test	**Test Case:** SWSI-SCH-001		**Report:** SWSI-SCH-001	**Status:** Pass	
Method: Test	**Test Case:** SWSI-SCH-002		**Report:** SWSI-SCH-002	**Status:** Pass	
Method: Test	**Test Case:** SWSI-SCH-003		**Report:** SWSI-SCH-003	**Status:** Pass	

Requirement: 4.2.2.2.1b				***Status:*** Verified	
Text: Based on the user's logon information, the SWSI shall provide the user with the capability to select the SUPIDEN to be used in the request from a list of SUPIDENs for which the user is authorized.				***Functionality:*** NCCDS	
Method: Test	**Test Case:** SWSI-SCH-001		**Report:** SWSI-SCH-001	**Status:** Pass	
Method: Test	**Test Case:** SWSI-SCH-002		**Report:** SWSI-SCH-002	**Status:** Pass	

Requirement: 4.2.2.2.1c			*Status:* Verified

Text: For each of these types of schedule requests, the SWSI shall provide the user with the capability to create a new request by copying and editing a previous request.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass

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Requirement: 4.2.2.2.1d			*Status:* Verified

Text: For each of these types of schedule requests, the SWSI shall provide the user with the capability to use all options specified for that type of request by 451-ICD-NCCDS/MOC.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003	**Status:** Pass

---

Requirement: 4.2.2.2.1e			*Status:* Verified

Text: For each of these types of schedule requests, the SWSI shall format the request in compliance with the applicable tables of 451-ICD-NCCDS/MOC. In particular, the SWSI shall not transmit schedule requests to the NCCDS that will result in Schedule Result Messages (SRMs) with a combination of result and explanation codes indicating invalid formatting.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass

---

Requirement: 4.2.2.2.1f			*Status:* Verified

Text: The SWSI shall not transmit schedule requests to the NCCDS that will result in a lack of response from the NCCDS due to failure to pass authorization checks.

Functionality: NCCDS

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass

Requirement: 4.2.2.2.1g   *Status:* Verified

    Text: Upon completion of the user's entry of a request, the SWSI shall format, store, and then   *Functionality:* NCCDS
transmit the request.

| **Method:** Test | **Test Case:** SWSI-SCH-001 | **Report:** SWSI-SCH-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-SCH-002 | **Report:** SWSI-SCH-002 | **Status:** Pass |

Requirement: 4.2.2.2.1h   *Status:* Verified

    Text: The SWSI shall retain all stored requests until the request expires according to   *Functionality:* NCCDS
administrative personnel-specified criteria.

| **Method:** Test | **Test Case:** SWSI-SCH-001 | **Report:** SWSI-SCH-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-SCH-002 | **Report:** SWSI-SCH-002 | **Status:** Pass |

Requirement: 4.2.2.2.3a   *Status:* Verified

    Text: Schedule Delete Request: The SWSI shall ensure that each SDR contains a valid   *Functionality:* NCCDS
reference to an active event, or to a previously transmitted SAR, ASAR, or RR.

| **Method:** Test | **Test Case:** SWSI-SCH-003 | **Report:** SWSI-SCH-003 | **Status:** Pass |

Requirement: 4.2.2.2.3b   *Status:* Verified

    Text: Schedule Delete Request: SWSI shall provide the user with displays of the current active   *Functionality:* NCCDS
events and previously transmitted schedule requests.

| **Method:** Test | **Test Case:** SWSI-SCH-003 | **Report:** SWSI-SCH-003 | **Status:** Pass |

Requirement: 4.2.2.2.4a   *Status:* Verified

    Text: Schedule Replace Request: SWSI shall ensure that each RR contains a valid reference to   *Functionality:* NCCDS
an active event, or to a previously transmitted SAR, ASAR, or RR.

| **Method:** Test | **Test Case:** SWSI-SCH-003 | **Report:** SWSI-SCH-003 | **Status:** Pass |

Requirement: 4.2.2.2.4b				*Status:* Verified
Text: Schedule Replace Request: SWSI shall provide the user with displays of the current active events and previously transmitted schedule requests.				*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003		**Status:** Pass

Requirement: 4.2.2.2.5a				*Status:* Verified
Text: Alternate SAR: SWSI shall ensure that each ASAR contains a valid reference to a previously transmitted SAR, ASAR, or RR.				*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003		**Status:** Pass

Requirement: 4.2.2.2.5b				*Status:* Verified
Text: Alternate SAR: SWSI shall provide the user with displays of previously transmitted schedule requests.				*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003		**Status:** Pass

Requirement: 4.2.2.2.6a				*Status:* Verified
Text: Schedule Wait List Request: SWSI shall ensure that each WLR contains a valid reference to a previously transmitted SAR, ASAR, or RR and that the previously transmitted SAR, ASAR, or RR has been declined by the NCCDS, i.e., the NCCDS has transmitted an SRM with result code of 02.				*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003		**Status:** Pass

Requirement: 4.2.2.2.6b				*Status:* Verified
Text: Schedule Wait List Request: SWSI shall provide the user with displays of previously transmitted schedule requests that indicate whether the request has been declined by the NCCDS.				*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003	**Report:** SWSI-SCH-003		**Status:** Pass

Requirement: 4.2.2.3a		*Status:* Verified
Text: The SWSI shall provide the user with the capability to import files of TSWs into the SWSI. These TSW files must be in a format compatible with the TSW message format specified by 451-ICD-NCCDS/MOC.		*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003 **Report:** SWSI-SCH-003	**Status:** Pass
Requirement: 4.2.2.3b		*Status:* Verified
Text: The SWSI shall provide the user with the capability to select imported TSW files for transmission to the NCCDS.		*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003 **Report:** SWSI-SCH-003	**Status:** Pass
Requirement: 4.2.2.3c		*Status:* Verified
Text: Based on the SIC within each selected file, the SWSI shall verify that the user is authorized to send this TSW data to the NCCDS.		*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003 **Report:** SWSI-SCH-003	**Status:** Pass
Requirement: 4.2.2.3d		*Status:* Verified
Text: For each validly selected file, the SWSI shall format the selected TSWs into one or more valid TSW messages, and transmit them to the NCCDS.		*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-SCH-003 **Report:** SWSI-SCH-003	**Status:** Pass
Requirement: 4.2.2.4		*Status:* Verified
Text: TDRSS Unscheduled Time: The SWSI shall retrieve current TDRSS Unscheduled Time (TUT) information from the NCCDS and store it so that it is accessible to Internet and Open IONET SWSI users.		*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-TUT-001 **Report:** SWSI-TUT-001	**Status:** Pass

Requirement: 4.2.2.5.2a   ***Status:*** Verified

     Text: Upon receipt of an Schedule Result Messages (SRM), the SWSI shall notify the user that the SRM has been received.   ***Functionality:*** NCCDS

| **Method:** Test | **Test Case:** SWSI-SCH-001 | **Report:** SWSI-SCH-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-SCH-002 | **Report:** SWSI-SCH-002 | **Status:** Pass |

Requirement: 4.2.2.5.2b   ***Status:*** Verified

     Text: Upon receipt of an SRM, the SWSI shall provide the user with the capability to review the SRM.   ***Functionality:*** NCCDS

| **Method:** Test | **Test Case:** SWSI-SCH-001 | **Report:** SWSI-SCH-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-SCH-002 | **Report:** SWSI-SCH-002 | **Status:** Pass |

Requirement: 4.2.2.5.2c   ***Status:*** Verified

     Text: Upon receipt of an SRM, the SWSI shall use the result and explanation codes from the SRM to update the status information for the request or event referenced by the SRM.   ***Functionality:*** NCCDS

| **Method:** Test | **Test Case:** SWSI-SCH-001 | **Report:** SWSI-SCH-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-SCH-002 | **Report:** SWSI-SCH-002 | **Status:** Pass |

Requirement: 4.2.2.5.2d   ***Status:*** Verified

     Text: Upon receipt of an SRM, the SWSI shall provide the user with the capability to review the requests or events with the updated status information.   ***Functionality:*** NCCDS

| **Method:** Test | **Test Case:** SWSI-SCH-001 | **Report:** SWSI-SCH-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-SCH-002 | **Report:** SWSI-SCH-002 | **Status:** Pass |

Requirement: 4.2.2.5.2e   ***Status:*** Verified

     Text: Upon receipt of an SRM, the SWSI shall, if the result code is 15, delete the referenced event (if any) and annotate the referenced request to indicate that it has been deleted.   ***Functionality:*** NCCDS

| **Method:** Test | **Test Case:** SWSI-SCH-003 | **Report:** SWSI-SCH-003 | **Status:** Pass |

Requirement: 4.2.2.5.3a   *Status:* Verified

    Text: Upon receipt of an User Schedule Messages (USM), the SWSI shall notify the user that   *Functionality:* NCCDS
the USM has been received.

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass

Requirement: 4.2.2.5.3b   *Status:* Verified

    Text: Upon receipt of an USM, the SWSI shall use the USM to update the SWSI's schedule.   *Functionality:* NCCDS

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass

Requirement: 4.2.2.5.3c   *Status:* Verified

    Text: Upon receipt of an USM, the SWSI shall provide the user with the capability to review the   *Functionality:* NCCDS
updated schedule, including the new USM.

Method: Test	**Test Case:** SWSI-SCH-001	**Report:** SWSI-SCH-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-SCH-002	**Report:** SWSI-SCH-002	**Status:** Pass

Requirement: 4.2.3.1a   *Status:* Verified

    Text: SWSI shall provide the user with the capability to enter the following types of GCMRs: *Functionality:* NCCDS
User Reacquisition Request, User Reconfiguration Request, Forward Link Sweep
Request, Forward Link Effective Isotropic Radiated Power (EIRP) Reconfiguration
Request, Expanded User Frequency Uncertainty Request, Doppler Compensation Inhibit
Request.

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass

Requirement: 4.2.3.1b   *Status:* Verified

    Text: Based on the user's logon information, the SWSI shall provide the user with the capability   *Functionality:* NCCDS
to select the SUPIDEN to be used in the request from a list of SUPIDENs for which the user
is authorized.

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass

Requirement: 4.2.3.1c

Text: For each of these types of GCMRs, the SWSI shall provide the user with the capability to use all options specified for that type of request by 451-ICD-NCCDS/MOC.

Status: Verified

Functionality: NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

---

Requirement: 4.2.3.1d

Text: For each of these types of GCMRs, the SWSI shall format the GCMR in compliance with the applicable tables of 451-ICD-NCCDS/MOC. In particular, the SWSI shall not transmit GCMRs to the NCCDS that will result in a GCM Status Message indicating that the GCMR has been rejected by the NCCDS due to invalid formatting or due to reference to an inapplicable service type.

Status: Verified

Functionality: NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

---

Requirement: 4.2.3.1e

Text: The SWSI shall not transmit GCMRs to the NCCDS that will result in a lack of response from the NCCDS due to failure to pass authorization checks.

Status: Verified

Functionality: NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

---

Requirement: 4.2.3.1f

Text: Upon completion of the user's entry of a request, the SWSI shall transmit and store the request.

Status: Verified

Functionality: NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

Requirement: 4.2.3.2   **Status:** Verified

Text: SWSI shall provide the user with the capability to review the configuration of each currently active service and to use this information in the entry of GCMRs as follows: a. For each service type, the service configuration display will provide detailed information at the individual service parameter level. This level of detail is comparable to that of the USM formats specified in 451-ICD-NCCDS/MOC. b. As of service start time, the information in the service configuration display will reflect the initial state of the service as specified in the applicable USM. c. Upon a successful service reconfiguration, the information in the service configuration display will updated to reflect the reconfigured parameter or parameters.   **Functionality:** NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

---

Requirement: 4.2.3.3a   **Status:** Verified

Text: Upon receipt of a GCM Status Message, the SWSI shall notify the user that the GCM Status Message has been received, and show whether the status message indicates that a GCMR was rejected by the NCCDS, rejected by WSC, or accepted by WSC.   **Functionality:** NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

---

Requirement: 4.2.3.3b   **Status:** Verified

Text: Upon receipt of a GCM Status Message, the SWSI shall allow the user to view the GCM Status Message.   **Functionality:** NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

---

Requirement: 4.2.3.3c   **Status:** Verified

Text: Upon receipt of a GCM Status Message, the SWSI shall update the information used in the service configuration display if the GCM Status Message indicates that the GCMR was accepted by WSC.   **Functionality:** NCCDS

Method: Test   **Test Case:** SWSI-GCMR-001   **Report:** SWSI-GCMR-001   **Status:** Pass

Requirement: 4.2.3.4   *Status:* Verified

   Text: Upon receipt of a GCM Disposition Message, the SWSI shall notify the user that the GCM   *Functionality:* NCCDS
   Disposition Message has been received, and show whether the message indicates that a
   reconfiguration request was acknowledged or not acknowledged by WSC.

Method: Test	**Test Case:** SWSI-GCMR-001	**Report:** SWSI-GCMR-001	**Status:** Pass

---

Requirement: 4.2.4.2a   *Status:* Verified

   Text: For each TDRS, the SWSI shall be capable for receiving one UPD message each five   *Functionality:* NCCDS
   seconds for each SWSI user with an active service on that TDRS.

Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-002	**Report:** SWSI-UPD-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-003	**Report:** SWSI-UPD-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-004	**Report:** SWSI-UPD-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-005	**Report:** SWSI-UPD-005	**Status:** Pass

---

Requirement: 4.2.4.2b   *Status:* Verified

   Text: Upon receipt of a UPD message, the SWSI shall verify that it applies to a SUPIDEN for   *Functionality:* NCCDS
   which there is a logged-on SWSI user. If it does, the SWSI shall make the information from
   the UPD message available for presentation to that user in real time.

Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-002	**Report:** SWSI-UPD-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-003	**Report:** SWSI-UPD-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-004	**Report:** SWSI-UPD-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-005	**Report:** SWSI-UPD-005	**Status:** Pass

Requirement: 4.2.4.2c   **Status:** Verified

Text: SWSI shall provide users with the following capabilities and options for the presentation of UPD message information: Default display formats, dynamic updates as new messages are received, display of most recently received message, user customized display formats, limit checking of user selected parameters according to user specified criteria, summary displays, display of UPD data in its "as received" state without application of any of the user options.   **Functionality:** NCCDS

Method: Test	**Test Case:** SWSI-UPD-001	**Report:** SWSI-UPD-001	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-002	**Report:** SWSI-UPD-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-003	**Report:** SWSI-UPD-003	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-004	**Report:** SWSI-UPD-004	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-005	**Report:** SWSI-UPD-005	**Status:** Pass

---

Requirement: 4.2.4.3a   **Status:** Verified

Text: Upon receipt of a RCTD message, the SWSI shall verify that it applies to a SUPIDEN for which there is a logged-on SWSI user. If it does, the SWSI shall notify the user of the receipt of the RCTD message.   **Functionality:** NCCDS

| **Method:** Test | **Test Case:** SWSI-MISC-003 | **Report:** SWSI-MSIC-003 | **Status:** Pass |

Requirement: 4.2.4.3b   **Status:** Verified

Text: SWSI shall store the RCTD message in a file on the Client Workstation such that it is available for later processing by customer applications.   **Functionality:** NCCDS

| **Method:** Test | **Test Case:** SWSI-MISC-003 | **Report:** SWSI-MSIC-003 | **Status:** Pass |

Requirement: 4.2.4.4a   **Status:** Verified

Text: Upon receipt of a TTM, the SWSI shall verify that it applies to a SUPIDEN for which there is a logged-on SWSI user. If it does, the SWSI shall notify the user of the receipt of the TTM.   **Functionality:** NCCDS

| **Method:** Test | **Test Case:** SWSI-MISC-003 | **Report:** SWSI-MSIC-003 | **Status:** Pass |

Requirement: 4.2.4.4b			*Status:* Verified
Text: SWSI shall store the TTM in a file on the Client Workstation such that it is available for later processing by customer applications.			*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-MISC-003	**Report:** SWSI-MSIC-003	**Status:** Pass

Requirement: 4.2.4.5			*Status:* Verified
Text: Upon receipt of an AFN Message, the SWSI shall verify that it applies to a SUPIDEN for which there is a logged-on SWSI user. If it does, the SWSI shall notify the user of the receipt of the AFN.			*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-MISC-003	**Report:** SWSI-MSIC-003	**Status:** Pass

Requirement: 4.2.5a			*Status:* Verified
Text: Based on the user's logon information, the SWSI shall provide the user with the capability to select the SIC to be used in vectors from a list of SICs for which the user is authorized.			*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 4.2.5b			*Status:* Verified
Text: The SWSI shall provide the user with the capability to enter the latitude, longitude, and altitude of a customer spacecraft.			*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 4.2.5c			*Status:* Verified
Text: The SWSI shall be capable of converting a user-entered set of latitude, longitude, and altitude data for a customer spacecraft into a type 8 (stationary) Improved Interrange Vector (IIRV) for that spacecraft.			*Functionality:* NCCDS
Method: Test	**Test Case:** SWSI-VECTOR-001	**Report:** SWSI-VECTOR-001	**Status:** Pass

Requirement: 4.2.5d   **Status:** Verified

     Text: The SWSI shall provide the user with the capability to directly enter IIRVs.   **Functionality:** NCCDS

     Method: Test   **Test Case:** SWSI-VECTOR-001   **Report:** SWSI-VECTOR-001   **Status:** Pass

---

Requirement: 4.2.5e   **Status:** Verified

     Text: The SWSI shall provide the user with the capability to import files of IIRVs.   **Functionality:** NCCDS

     Method: Test   **Test Case:** SWSI-VECTOR-001   **Report:** SWSI-VECTOR-001   **Status:** Pass

---

Requirement: 4.2.5f   **Status:** Verified

     Text: The SWSI shall provide the user with the capability to select one or more IIRVs for transmission to the NCCDS.   **Functionality:** NCCDS

     Method: Test   **Test Case:** SWSI-VECTOR-001   **Report:** SWSI-VECTOR-001   **Status:** Pass

---

Requirement: 4.3.1.2   **Status:** Verified

     Text: In all cases, the SWSI shall ensure that each DAS user is precluded from accessing any other user's messages or data.   **Functionality:** DAS

     Method: Test   **Test Case:** SWSI-MISC-004   **Report:** SWSI-MISC-004   **Status:** Pass

     Method: Test   **Test Case:** SWSI-SSCEDIT-001   **Report:** SWSI-SSCEDIT-001   **Status:** Pass

---

Requirement: 4.3.1.3   **Status:** Verified

     Text: For each SIC supported by the SWSI, the SWSI shall provide authorized SWSI administrative personnel with the capability to create and maintain all customer data necessary to interact with the DAS. In particular, this will include a set of service specification codes (SSCs) defining the default service configurations for the SIC. For each SIC, the SWSI shall be capable of retaining a minimum of 10 SSCs. The SWSI shall provide the user with the capability to review and reference this data in the process of entering requests.   **Functionality:** DAS

     Comments: SWSI requirement 4.3.1.3 regression tested during SWSI Final Acceptance Testing.

     Method: Test   **Test Case:** SWSI-SSCEDIT-001   **Report:** SWSI-SSCEDIT-001   **Status:** Pass

     Method: Demonstration   **Description:** Demonstration by Use (Data Management).   **Status:** Pass

Requirement: 4.3.2a   **Status:** Verified

    Text: The SWSI shall provide the user with the capability to request a report on the resource   **Functionality:** DAS
allocations available to the user.

Comments: SWSI requirement 4.3.2a traces to DAS requirement 3.1.2.2.a, which is verified in DAS
Test Case Q1.1.
SWSI requirement 4.3.2 regression tested during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** DAS Q1.1 | **Report:** DAS Acceptance Test | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-RAVAIL-001 | **Report:** SWSI-RAVAIL-001 | **Status:** Pass |

Requirement: 4.3.2b   **Status:** Verified

    Text: Upon receipt of the response from the DAS, the SWSI shall notify the user and make the   **Functionality:** DAS
response available for review.

Comments: SWSI requirement 4.3.2b traces to DAS requirement 3.1.2.2.b, which is verified in DAS
Test Case Q1.1.
SWSI requirement 4.3.2 regression tested during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** DAS Q1.1 | **Report:** DAS Acceptance Test | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-RAVAIL-001 | **Report:** SWSI-RAVAIL-001 | **Status:** Pass |

Requirement: 4.3.3a   *Status:* Verified

    Text: SWSI shall provide the user with the capability to request the following: Allocation of a   *Functionality:* DAS
specified resource, Deletion of a pending or ongoing resource allocation, Modification of a
pending resource allocation, A list of all currently planned events for the user, The details
of a specified planned event.

  Comments: SWSI 4.3.3a traces to DAS 3.1.2.3.1.a (Allocation), 3.1.2.3.2.b - c (Deletion/Mod), and
3.1.2.3.1.h (List planned events/Details specified planned events), verified in DAS Test
Case Q1.2.
SWSI 4.3.3 regression tested during SWSI Final Acceptance Testing.

Method:	**Test Case:**	**Report:**	**Status:**
Test	DAS Q1.2	DAS Acceptance Test	Pass
Test	SWSI-PEND-001	SWSI-PEND-001	Pass
Test	SWSI-RADR-001	SWSI-RADR-001	Pass
Test	SWSI-RADR-002	SWSI-RADR-002	Pass
Test	SWSI-RAMR-001	SWSI-RAMR-001	Pass
Test	SWSI-RAR-001	SWSI-RAR-001	Pass

Requirement: 4.3.3b   *Status:* Verified

    Text: Upon receipt of the response from the DAS, the SWSI shall notify the user and make the   *Functionality:* DAS
response available for review.

  Comments: SWSI 4.3.3b traces to DAS 3.1.2.3.1.h (Allocation, List planned events, and Details
specified planned events) and 3.1.2.3.2.d (Deletion/Mod), which are verified in DAS Test
Case Q1.2.
SWSI 4.3.3 regression tested during SWSI Final Acceptance Testing.

Method:	**Test Case:**	**Report:**	**Status:**
Test	DAS Q1.2	DAS Acceptance Test	Pass
Test	SWSI-PEND-001	SWSI-PEND-001	Pass
Test	SWSI-RADR-001	SWSI-RADR-001	Pass
Test	SWSI-RAMR-001	SWSI-RAMR-001	Pass
Test	SWSI-RAR-001	SWSI-RAR-001	Pass

Requirement: 4.3.4a   *Status:* Verified

> **Text:** SWSI shall provide the user with the capability to request the following: 1)   *Functionality:* DAS
> Reconfiguration of the values of a specified list of parameters for an ongoing service; 2)
> Reacquisition of the return service signal.

> **Comments:** SWSI requirement 4.3.4a traces to DAS requirement 3.1.2.3.2.c, which is verified in DAS
> Test Case Q1.2.
> SWSI 4.3.4 regression tested during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** DAS Q1.2	**Report:** DAS Acceptance Test	**Status:** Pass
Method: Test	**Test Case:** SWSI-GCMR-002	**Report:** SWSI-GCMR-002	**Status:** Pass

---

Requirement: 4.3.4b   *Status:* Verified

> **Text:** Upon receipt of the response from the DAS, the SWSI shall notify the user and make the   *Functionality:* DAS
> response available for review.

> **Comments:** SWSI requirement 4.3.4b traces to DAS requirement 3.1.2.3.2.d, which is verified in DAS
> Test Case Q1.2.
> SWSI 4.3.4 regression tested during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** DAS Q1.2	**Report:** DAS Acceptance Test	**Status:** Pass
Method: Test	**Test Case:** SWSI-GCMR-002	**Report:** SWSI-GCMR-002	**Status:** Pass

---

Requirement: 4.3.5a   *Status:* Verified

> **Text:** The SWSI shall provide the user with the capability to request that DAS user performance   *Functionality:* DAS
> data be enabled or disabled.

> **Comments:** SWSI requirement 4.3.5a traces to DAS requirement 3.1.7.2.a, which is verified in DAS
> Test Case Q4.2.
> SWSI 4.3.5 regression tested during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** DAS Q4.2	**Report:** DAS Acceptance Test	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-006	**Report:** SWSI-UPD-006	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-007	**Report:** SWSI-UPD-007	**Status:** Pass

Requirement: 4.3.5b

Status: Verified

Text: Upon receipt of the response from the DAS, the SWSI shall notify the user and make the response available for review.

Functionality: DAS

Comments: SWSI requirement 4.3.5b traces to DAS requirement 3.1.7.2.a, which is verified in DAS Test Case Q4.2.
SWSI 4.3.5 regression tested during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** DAS Q4.2	**Report:** DAS Acceptance Test	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-006	**Report:** SWSI-UPD-006	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-007	**Report:** SWSI-UPD-007	**Status:** Pass

Requirement: 4.3.5c

Status: Verified

Text: If user performance data was enabled, the SWSI shall provide this data to the user as it is received from the DAS.

Functionality: DAS

Comments: SWSI requirement 4.3.5c traces to DAS requirement 3.1.7.2.a, which is verified in DAS Test Case Q4.2.
SWSI 4.3.5 regression tested during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** DAS Q4.2	**Report:** DAS Acceptance Test	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-006	**Report:** SWSI-UPD-006	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-007	**Report:** SWSI-UPD-007	**Status:** Pass

Requirement: 4.3.5d

Status: Verified

Text: The SWSI shall be capable of receiving one DAS user performance data message per minute for each active service with ongoing DAS support.

Functionality: DAS

Comments: SWSI requirement 4.3.5d traces to DAS requirement 3.2.7.2.a, which is verified in DAS Test Case Q4.2.
SWSI 4.3.5 regression tested during SWSI Final Acceptance Testing.

Method: Test	**Test Case:** DAS Q4.2	**Report:** DAS Acceptance Test	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-006	**Report:** SWSI-UPD-006	**Status:** Pass
Method: Test	**Test Case:** SWSI-UPD-007	**Report:** SWSI-UPD-007	**Status:** Pass

Requirement: 4.3.6a   **Status:** Verified

Text: SWSI shall provide the user with the capability to request the following: A search for   **Functionality:** DAS
archived data within a specified time window, Playback of specific archived data,
Deletion of a previously playback request, Modification of a previously playback request.

Comments: SWSI 4.3.6a traces to DAS 3.1.5.1.3.a, tested in DAS Test Case Q6.
DAS 3.1.5.1.3.a failed verification. DAS waiver DAS-W13 approved by NASA.
SWSI 4.3.6 passed verification during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** SWSI-PBKMR-001 | **Report:** SWSI-PBKMR-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-PBKR-001 | **Report:** SWSI-PBKR-001 | **Status:** Pass |

Requirement: 4.3.6b   **Status:** Verified

Text: Upon receipt of the response from the DAS, the SWSI shall notify the user and make the   **Functionality:** DAS
response available for review.

Comments: SWSI 4.3.6b traces to DAS 3.1.5.1.3.a, tested in DAS Test Case Q6.
DAS 3.1.5.1.3.a failed verification. DAS waiver DAS-W13 approved by NASA.
SWSI 4.3.6 passed verification during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** SWSI-PBKMR-001 | **Report:** SWSI-PBKMR-001 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-PBKR-001 | **Report:** SWSI-PBKR-001 | **Status:** Pass |

Requirement: 4.3.7a   **Status:** Verified

Text: SWSI shall provide the user with the capability to enter and transmit a state vector.   **Functionality:** DAS

Comments: SWSI 4.3.7a traces to DAS 3.1.2.4.2.a, tested in DAS Test Case Q1.3. DAS 3.1.2.4.2.a
failed verification. DAS waiver DAS-W23 approved by NASA.
SWSI 4.3.7 passed verification during SWSI Final Acceptance Testing.

| **Method:** Test | **Test Case:** SWSI-VECTOR-002 | **Report:** SWSI-VECTOR-002 | **Status:** Pass |
| **Method:** Test | **Test Case:** SWSI-VECTOR-003 | **Report:** SWSI-VECTOR-003 | **Status:** Pass |

Requirement: 4.3.7b   **Status:** Verified

Text: Upon receipt of the response from the DAS, the SWSI shall notify the user and make the   **Functionality:** DAS
response available for review.

Comments: SWSI 4.3.7b traces to DAS 3.1.2.4.2.e, tested in DAS Test Case Q1.3. DAS requirement
3.1.2.4.2.e failed verification. DAS waiver DAS-W23 approved by NASA.
SWSI 4.3.7 passed verification during SWSI Final Acceptance Testing.

Method:	Test Case:	Report:	Status:
Method: Test	**Test Case:** SWSI-VECTOR-002	**Report:** SWSI-VECTOR-002	**Status:** Pass
Method: Test	**Test Case:** SWSI-VECTOR-003	**Report:** SWSI-VECTOR-003	**Status:** Pass

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Requirement: 4.3.8   **Status:** Verified

Text: DAS Alerts: Upon receipt of a DAS alert, the SWSI shall alert the user implied by the SIC   **Functionality:** DAS
specified in the DAS alert message and make the text of the DAS alert message available
for review by that user. If the DAS alert message does not apply to a specific user (i.e.,
SIC = "0000"), the SWSI shall alert all users and make the text of the DAS alert message
available for review by all users.

Comments: SWSI 4.3.8 traces to DAS 3.1.7.1.f and 3.1.7.1.k, tested in DAS TC Q8. DAS 3.1.7.1.k
passed verification; however, DAS 3.1.7.1.f failed. DAS waiver DAS-W09 approved by
NASA.
SWSI 4.3.8 passed verification during SWSI Final Acceptance Testing.

Method: Test   **Test Case:** SWSI-PEND-001   **Report:** SWSI-PEND-001   **Status:** Pass

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Requirement: 4.4.1   **Status:** Verified

Text: The SWSI shall provide a database management capability for all SWSI data. The general   **Functionality:** General
database management features of the SWSI shall include, but not necessarily be limited to
 (refer to SWSI Req'ts Doc.: 4.4.1a through 4.4.1l).

Method: Demonstration   **Description:** Demonstration by Use (Data Management).   **Status:** Pass

| *Requirement:* | 4.4.2.1 | | | *Status:* | Verified |

Requirement: 4.4.2.1   ***Status:*** Verified

Text: The SWSI shall provide all data storage and retrieval capabilities necessary to support the requirements for SN services specified herein. This includes the capability to store and retain requests sent to the NCCDS and to the DAS.

Functionality: General

Method: Inspection   ***Description:*** Inspection of 453-SDS-SWSI, the SWSI System Design Specification.   ***Status:*** Pass

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Requirement: 4.4.2.2   ***Status:*** Verified

Text: For each SIC, the SWSI shall partition data such that some of the data for that SIC can be entered, deleted, or modified only by authorized SWSI administrative personnel while the remainder of the data for that SIC can be entered, deleted, or modified by SWSI client users authorized for that SIC. In general, privileges related to entry, deletion, or modification of relatively static data such as SSCs will be restricted to authorized SWSI administrative personnel while privileges related to entry, deletion, or modification of time-dependent data such as schedule requests will be restricted to SWSI client users.

Functionality: General

Method: Demonstration   ***Description:*** Demonstration by Use (Data Management).   ***Status:*** Pass

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Requirement: 4.4.2.3   ***Status:*** Verified

Text: SWSI shall be capable of automatically purging data related to SN services based on criteria specified by authorized SWSI administrative personnel.

Functionality: General

Method: Demonstration   ***Description:*** Demonstration by Use (Data Management).   ***Status:*** Pass

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Requirement: 4.4.2.4   ***Status:*** Verified

Text: The SWSI shall be capable of deleting data related to SN services under the direct control of authorized SWSI client users.

Functionality: General

Method: Demonstration   ***Description:*** Demonstration by Use (Data Management).   ***Status:*** Pass

Requirement: 4.4.3.1	**Status:** Verified
Text: The SWSI shall provide SWSI administrative personnel with the capability to access the contents of server log files.	**Functionality:** General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 4.4.3.2	**Status:** Verified
Text: The SWSI shall provide SWSI client users with the capability to access the contents of client log files containing data for which the user is authorized.	**Functionality:** General
Method: Test **Test Case:** SWSI-MISC-003 **Report:** SWSI-MSIC-003	**Status:** Pass

Requirement: 4.5.1	**Status:** Verified
Text: SWSI shall be capable of logging and delogging: incoming external messages, outgoing external messages, alerts sent to SWSI clients, records pertaining to the establishment and termination of communications connections, records pertaining to SWSI system failures, records pertaining to SWSI database failures, records pertaining to successful SWSI logon attempts, and records pertaining to rejected SWSI logon attempts.	**Functionality:** General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 4.5.2	**Status:** Verified
Text: The SWSI shall provide SWSI administrative personnel with the capability to selectively control the logging and delogging of all of the above.	**Functionality:** General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 4.5.3	**Status:** Verified
Text: The SWSI shall provide SWSI client users with the capability to selectively control delogging of all of the above data for which the user is authorized.	**Functionality:** General
Method: Demonstration **Description:** Demonstration by Use (Data Management).	**Status:** Pass

Requirement: 4.6.1   **Status:** Verified

Text: The SWSI shall have the capacity to store data for a minimum of 100 customer spacecraft. The SWSI shall allow for one set of operational data and for at least one set of test data for each spacecraft.   **Functionality:** General

Method: Inspection   **Description:** Inspection of 453-SDS-SWSI, the SWSI System Design Specification.   **Status:** Pass

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Requirement: 4.6.2   **Status:** Verified

Text: For any combination of Internet, Open IONET and Closed IONET SWSI clients, the SWSI servers shall be capable of supporting simultaneous connections with a minimum of fifty SWSI clients.   **Functionality:** General

Method: Test   **Test Case:** SWSI-PERF-001   **Report:** SWSI-PERF-001   **Status:** Pass

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Requirement: 4.6.3a   **Status:** Verified

Text: The SWSI response time from the perspective of the SWSI client shall not be more than 10 seconds greater than the NCCDS or DAS response time from the perspective of the SWSI backend server.   **Functionality:** General

Method: Test   **Test Case:** SWSI-PERF-001   **Report:** SWSI-PERF-001   **Status:** Pass

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Requirement: 4.6.3b   **Status:** Verified

Text: For interactions initiated from the SWSI client and requiring simple retrieval of data from the SWSI database, the SWSI response time from the perspective of the SWSI client shall not be greater than 10 seconds.   **Functionality:** General

Method: Test   **Test Case:** SWSI-PERF-001   **Report:** SWSI-PERF-001   **Status:** Pass

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Requirement: 5.1.1   **Status:** Verified

Text: SWSI servers shall be capable of continuous unattended operation.   **Functionality:** General

Method: Demonstration   **Description:** Demonstration by Use.   **Status:** Pass

Requirement: 5.1.2	**Status:** Verified
Text: SWSI servers shall be designed and configured such that routine system maintenance operations and routine system administrative functions can be executed without rendering the capabilities of the servers operationally unavailable to the SWSI clients.	**Functionality:** General

Method: Inspection   **Description:** Inspection of 453-SDS-SWSI, the SWSI System Design Specification.   **Status:** Pass

---

Requirement: 5.2.1.2	**Status:** Waived
Text: The Parts Count Reliability prediction method of MIL-HDBK-217 shall be used in the initial stages of system design.	**Functionality:** General

Comments: Waiver Request SWSI-W004 approved by NASA on 3 October 2003.

Waiver: SWSI-W004   **Date:** 10/3/2003

Requirement: 5.2.1.3	**Status:** Waived
Text: The reliability prediction method shall shift to the Parts Stress Analysis Prediction method, or other reliability modeling technique approved by NASA, at the time when a firm, detailed parts list is available.	**Functionality:** General

Comments: Waiver Request SWSI-W004 approved by NASA on 3 October 2003.

Waiver: SWSI-W004   **Date:** 10/3/2003

Requirement: 5.2.1.4	**Status:** Waived
Text: The MTBFs of the SWSI servers shall be determined in accordance with MIL-HDBK-217, Reliability Prediction of Electronic Equipment.	**Functionality:** General

Comments: Waiver Request SWSI-W004 approved by NASA on 3 October 2003.

Waiver: SWSI-W004   **Date:** 10/3/2003

Requirement: 5.2.2

Text: The maintainability requirement for the SWSI servers is stated in terms of Mean Time To Repair (MTTR). The MTTR is the quotient obtained by dividing the sum of the times to repair failures by the number of failures. Excluded from time to repair are the time to obtain parts, components, tools, or supplies not provisioned at the SWSI facility, the time for essential personnel not scheduled to be at the SWSI facility to be notified of the failure and to travel to the SWSI facility, and the time to develop and configure software corrections. Based on the preceding definitions, the SWSI servers shall have an MTTR no greater than 60 minutes.

Status: Waived

Functionality: General

Comments: Waiver Request SWSI-W004 approved by NASA on 3 October 2003.

Waiver: SWSI-W004   **Date:** 10/3/2003

Requirement: 5.2.3.1.2

Text: The inherent availability of any individual SWSI server for any period of 10,000 hours shall be 0.9998.

Status: Waived

Functionality: General

Comments: Waiver Request SWSI-W004 approved by NASA on 3 October 2003.

Waiver: SWSI-W004   **Date:** 10/3/2003

Requirement: 5.2.3.2.2

Text: SWSI operational availability for any period of 10,000 hours interval shall be 0.9999. Redundant paths may be used in achieving this Ao.

Status: Waived

Functionality: General

Comments: Waiver Request SWSI-W004 approved by NASA on 3 October 2003.

Waiver: SWSI-W004   **Date:** 10/3/2003

Requirement: 5.3

Text: SWSI shall have the resources, personnel, and logistics support required to maintain, modify, and repair hardware and maintain modify and enhance software. Hardware maintenance is performed under a formally established system maintenance program that includes both Preventive Maintenance and Corrective Maintenance procedures.

Status: Waived

Functionality: General

Comments: Waiver Request SWSI-W001 approved by NASA on 19 June 2003.

Waiver: SWSI-W001   **Date:** 6/19/2003
Method: Inspection   **Description:** Inspection of the SWSI Operations & Maintenance (O&M) Manual.   **Status:** Fail

Requirement: 5.3.1a   **Status:** Waived

> **Text:** The contractor shall develop procedures using 500-TIP-2111, Content Specification for Operation and Maintenance Manuals, as a guideline.   **Functionality:** General

Comments: Waiver Request SWSI-W001 approved by NASA on 19 June 2003.

Waiver: SWSI-W001   **Date:** 6/19/2003

Method: Inspection   **Description:** Inspection of the SWSI Operations & Maintenance (O&M) Manual.   **Status:** Fail

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Requirement: 5.3.1b   **Status:** Waived

> **Text:** Any state-of-the-art techniques that are developed for the SWSI shall be included in the procedures.   **Functionality:** General

Comments: Waiver Request SWSI-W001 approved by NASA on 19 June 2003.

Waiver: SWSI-W001   **Date:** 6/19/2003

Method: Inspection   **Description:** Inspection of the SWSI Operations & Maintenance (O&M) Manual.   **Status:** Fail

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Requirement: 5.3.2.1   **Status:** Waived

> **Text:** LRUs shall include rack-mounted equipment drawers and panels and other assemblies that can be removed by unplugging power and signal connectors without physically disturbing other LRUs.   **Functionality:** General

Comments: Waiver Request SWSI-W002 approved by NASA on 19 June 2003.

Waiver: SWSI-W002   **Date:** 6/19/2003

Method: Inspection   **Description:** Inspection of the SWSI Operations & Maintenance (O&M) Manual.   **Status:** Fail

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Requirement: 5.3.2.2c   **Status:** Waived

> **Text:** Fault isolation to the level of a line replaceable item within an LRU (if any) shall be performed if the time required is consistent with the operational maintainability requirement.   **Functionality:** General

Comments: Waiver Request SWSI-W002 approved by NASA on 19 June 2003.

Waiver: SWSI-W002   **Date:** 6/19/2003

Method: Inspection   **Description:** Inspection of SWSI Operations & Maintenance (O&M) Manual.   **Status:** Fail

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Requirement: 5.3.2.2d		**Status:** Waived
Text: First level maintenance shall include replacement of a failed LRU or line replaceable element within an LRU.		**Functionality:** General
Comments: Waiver Request SWSI-W002 approved by NASA on 19 June 2003.		

Waiver: SWSI-W002	**Date:** 6/19/2003	
Method: Inspection	**Description:** Inspection of SWSI Operations & Maintenance (O&M) Manual.	**Status:** Fail

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Requirement: 5.3.2.2e	**Status:** Verified
Text: First level maintenance shall include testing to ensure that the system/subsystem has been restored to operational condition.	**Functionality:** General

Method: Inspection	**Description:** Inspection of 452-SOG-SWSI, the SWSI Server Operator's Guide	**Status:** Pass

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Requirement: 5.3.3.1	**Status:** Verified
Text: SWSI system shall provide capability for personnel to be cognizant of anomalous software behavior.	**Functionality:** General

Method: Inspection	**Description:** Inspection of 452-SOG-SWSI, the SWSI Server Operator's Guide	**Status:** Pass

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Requirement: 5.3.3.2	**Status:** Verified
Text: SWSI system shall provide capability for personnel to initiate software trouble reports.	**Functionality:** General

Method: Inspection	**Description:** Inspection of the SWSI Bug Tracking System (located on the SWSI Product Web Site)	**Status:** Pass

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Requirement: 5.3.3.3	**Status:** Verified
Text: SWSI system shall provide capability for personnel to install vendor-supplied software fixes and upgrades.	**Functionality:** General

Method: Inspection	**Description:** Inspection of 452-SOG-SWSI, the SWSI Server Operator's Guide	**Status:** Pass

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Requirement: 5.3.4

Status: Verified

Text: SWSI shall be configured redundantly (e.g., a prime and a backup) for both Open and Closed IONET. Therefore, there is no requirement for maintaining an on-site supply of spare components.

Functionality: General

Method: Inspection   **Description:** Inspection of 453-SDS-SWSI, the SWSI System Design Specification.

Status: Pass

Requirement: 6.1

Status: Verified

Text: SWSI operations personnel shall be provided with all documentation needed to perform the functions indicated above.

Functionality: General

Method: Inspection   **Description:** Inspection of 452-SOG-SWSI, the SWSI Server Operator's Guide

Status: Pass

Requirement: 6.2

Status: Waived

Text: All documentation shall be developed in accordance with the Data Requirements List (DRL) and Data Item Descriptions (DIDs). The DRL lists each document to be provided and the DIDs describe the purpose, content, and format of each document.

Functionality: General

Comments: Waiver Request SWSI-W003 approved by NASA on 19 June 2003.

Waiver: SWSI-W003   **Date:** 6/19/2003

Method: Inspection   **Description:** Inspection of SWSI Data Requirements List (DRL).

Status: Fail

Requirement: 7.1

Status: Verified

Text: The training policies, plans, and procedures shall provide for orderly transition into sustained operations and maintenance.

Functionality: General

Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Pass

Requirement: 7.1.1.1

Status: Verified

Text: The training program shall include a definition of the qualifications required by operations and maintenance personnel to meet position description skill requirements.

Functionality: General

Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Pass

Requirement: 7.1.1.2   *Status:* Verified

    Text: A training plan to define the phasing, methods and techniques for achieving the requisite   *Functionality:* General
            skill levels, using curricula and course materials for skill/qualification areas within each
            position description shall be included.

Method: Inspection   **Description:** Inspection of SWSI Training Materials   **Status:** Pass

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Requirement: 7.1.1.3   *Status:* Verified

    Text: Training devices and equipment shall be included.   *Functionality:* General

Method: Inspection   **Description:** Inspection of SWSI Training Materials   **Status:** Pass

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Requirement: 7.1.1.4   *Status:* Verified

    Text: Administrative support to implement the training program shall be included.   *Functionality:* General

Method: Inspection   **Description:** Inspection of SWSI Training Materials   **Status:** Pass

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Requirement: 7.1.2.1a   *Status:* Verified

    Text: Operator training shall cover the SWSI network overview.   *Functionality:* General

Method: Inspection   **Description:** Inspection of SWSI Training Materials   **Status:** Pass

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Requirement: 7.1.2.1b   *Status:* Verified

    Text: Operator training shall cover the SWSI concept of operation.   *Functionality:* General

Method: Inspection   **Description:** Inspection of SWSI Training Materials   **Status:** Pass

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Requirement: 7.1.2.1c   *Status:* Verified

    Text: Operator training shall cover detailed SWSI operational procedure.   *Functionality:* General

Method: Inspection   **Description:** Inspection of SWSI Training Materials   **Status:** Pass

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Requirement: 7.1.2.2a

    Text: Maintenance training for both hardware and software shall cover the SWSI maintenance concept.

    Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Verified

Functionality: General

Status: Pass

Requirement: 7.1.2.2b

    Text: Maintenance training for both hardware and software shall cover diagnostics and troubleshooting.

    Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Verified

Functionality: General

Status: Pass

Requirement: 7.1.2.2c

    Text: Maintenance training for both hardware and software shall cover detailed repair procedures and techniques including the use of available tools and repair equipment.

    Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Verified

Functionality: General

Status: Pass

Requirement: 7.1.2.2d

    Text: Maintenance training for both hardware and software shall cover SWSI software maintenance concepts.

    Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Verified

Functionality: General

Status: Pass

Requirement: 7.1.2.2e

    Text: Software maintenance training shall include debugging techniques.

    Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Verified

Functionality: General

Status: Pass

Requirement: 7.1.2.2f

    Text: Training shall cover maintenance of both operational and support software.

    Method: Inspection   **Description:** Inspection of SWSI Training Materials

Status: Verified

Functionality: General

Status: Pass

Requirement: 7.1.3.1		*Status:* Verified
Text: SWSI training devices and equipment for maintenance training shall be specified in the Training Plan.		*Functionality:* General
Method: Inspection	**Description:** Inspection of SWSI Training Materials	**Status:** Pass

Requirement: 7.1.4.1		*Status:* Verified
Text: Administrative support for training shall provide for the testing and certification of students.		*Functionality:* General
Method: Inspection	**Description:** Inspection of SWSI Training Materials	**Status:** Pass

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Abbreviations and Acronyms

Ai	Inherent Availability
ANCC	Auxiliary Network Control Center
Ao	operational availability
ASAR	Alternate Schedule Add Request
BB	bit block
CNE	Center Network Environment
DAS	Demand Access System
DBMS	Database Management System
DID	Data Item Descriptions
DRL	Data Requirements List
DSMC	Data Services Management Center
EIRP	Effective Isotropic Radiated Power
GCM	Ground Control Message
GCMR	Ground Control Message Request
GSFC	Goddard Space Flight Center
GUI	Graphical User Interface
HP	Hewlett-Packard
ICD	Interface Control Document
IIRV	Improved Inter-Range Vectors
IONet	Internet Protocol Operational Network
IP	Internet Protocol
IT	Information Technology
LDBP	Long Duration Balloon Project
LRU	line replaceable unit
MAR	Multiple Access Return
MOC	Mission Operations Center
MSOCC	Multisatellite Operations Control Center

MTBF	mean time between failures
MTTR	mean time to repair
N/A	Not Applicable
NASA	National Aeronautics and Space Administration
NCC	Network Control Center
NCCDS	Network Control Center Data System
NISN	NASA Integrated Services Network
NPG	NASA Procedures and Guidelines
O&M	Operations & Maintenance
ODIN	Outsourcing Desktop Initiative for NASA
PCD	Project Commitment Document
RCTD	Return Channel Time Delay
RMA	Reliability, Maintainability, and Availability
RR	Replace Request
SAR	Schedule Add Request
SDR	Schedule Delete Request
SIC	Spacecraft Identification Code
SN	Space Network
SRM	Schedule Result Message
STDN	Spaceflight Tracking and Data Network
SWSI	Space Network Web Services Interface
SUPIDEN	Support Identifier
TBS	to be supplied
TCP	Transmission Control Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol
TDRS	Tracking and Data Relay Satellite
TSW	TDRS Scheduling Window
TTM	Time Transfer Message
TUT	TDRSS Unscheduled Time
UPD	User Performance Data

UPS	User Planning System
USM	User Schedule Message
WAN	Wide Area Network
WLR	Wait List Request

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